WHAT IS CLAIMED IS:

1. An implant for connective tissue substitution in an animal, said implant comprising a pair of bone anchors joined at their proximal ends by at least one support filament, said support filament being coated by at least one matrix layer of thickness sufficient to allow for colonization by a cell.

2. The implant according to claim 1, wherein said matrix layer is colonized by a cell.

3. The implant according to claim 1, wherein said connective tissue substitution is partial or complete substitution of a connective tissue.

4. The implant according to claim 1, wherein said connective tissue is selected from the group consisting of a tendon, a cartilage, a disk, a meniscus, a muscle, a tooth, a hair, a joint, and a ligament, or a combination thereof.

5. The implant according to claim 1, wherein said animal is a human.

6. The implant according to claim 1, wherein said animal is a non-human mammal.

7. The implant according to claim 1, wherein said bone anchor is selected from the group consisting of a bone portion and a piece

composed of at least one of natural or synthetic biocompatible porous material.

8. The implant according to claim 1, wherein said matrix layer is a collagen gel layer.

9. The implant according to claim 1, wherein said matrix layer is selected from the group consisting of chitosan, glycosaminoglycan, chitin, ubiquitin, elastin, polyethylen glycol, polyethylen oxide, vimentin, fibronectin, and a protein promoting collagen alignment or assembly, or derivatives or a combination thereof.

10. The implant according to claim 1, wherein said support filament is selected from the group consisting of at least one of a resorbable thread, a natural fiber, and a filament composed of a protein, a lipid, a biocompatible molecule, and a synthetic component.

11. The implant according to claim 1, wherein said matrix layer further comprises a cell.

12. The implant according to claim 1, wherein cell is an autologous cell.

13. The implant according to claim 1, wherein said cell is a heterologous cell.

14. The implant according to claim 1, wherein said cell is selected from the group consisting of a fibroblast, a myoblast, an osteoblast, a mesenchymal cell, an endothelial cell, an immune cell, and a chondrocyte cell, or a combination thereof.

15. The implant according to claim 1, wherein said matrix layer further comprises a pharmaceutically effective amount of biologically active molecule selected from the group consisting of a drug, a growth factor, a cytokine, an antibiotic, and a hormone, or a combination thereof.

16. The implant according to claim 1, wherein at least one of said support filament or matrix layer is dehydrated or lyophilized prior to implantation.

17. The implant according to claim 1, wherein said matrix layer further comprises at least one inner layer of gel and/or filament coated by at least one supplementary matrix coating layer.

18. The implant according to claim 17, wherein said inner layer is dehydrated and said filament is hydrated and lyophilized prior to be incorporated to said matrix layer.

19. The implant according to claim 17, wherein said implant is dehydrated or lyophilized prior coating with said supplementary matrix coating layer.

20. The implant according to claim 19, wherein said supplementary matrix coating layer is further dehydrated or lyophilized before being coated by another supplementary matrix coating layer.

21. The implant according to claim 17, wherein said matrix coating layer further comprises a cell.

22. The implant according to claim 17, wherein said cell is an autologous cell.

23. The implant according to claim 21, wherein said cell is a heterologous cell.

24. The implant according to claim 21, wherein said cell is selected from the group consisting of a fibroblast, a myoblast, an osteoblast, a mesenchymal cell, an endothelial cell, an immune cell, and a chondrocyte, or a combination thereof.

25. A method of preparing an implant for connective tissue substitution in an animal, said method comprising the steps of:

a) providing a set of bone anchors by joining a pair of bone plugs at their proximal ends by at least one support filament; and

b) incubating at least one time said set of bone anchors of step a) in a solution containing matrix forming molecules for a period time sufficient for the formation of at least one matrix layer around said support filament,

wherein said matrix layer has a thickness sufficient to allow for colonization by cells, and wherein said incubation is performed under conditions in which are induced waves, vibrations, cyclic tractions, and/or static tractions of said implant.

26. The method according to claim 25, wherein said matrix is further colonized by a cell.

27. The method according to claim 25, wherein said implant is dehydrated, lyophilized and/or chemically treated prior to implantation.

28. The method according to claim 25, wherein said connective tissue is selected from the group consisting of a tendon, a cartilage, a disk, a meniscus, a muscle, a tooth, a hair, a joint, and a ligament, or a combination thereof.

29. The method according to claim 25, wherein said animal is a human.

30. The method according to claim 25, wherein said animal is a non-human mammal.

31. The method according to claim 25, wherein said bone anchor is selected from the group consisting of a bone portion and a piece composed of natural and/or synthetic biocompatible porous material.

32. The method according to claim 25, wherein said matrix layer is a collagen gel layer.

33. The method according to claim 25, wherein said matrix layer is composed of compound selected from the group consisting of chitosan, glycosaminoglycan, chitin, ubiquitin, elastin, polyethylen glycol, polyethylen oxide, vimentin, and fibronectin, or derivatives or combinations thereof.

34. The method according to claim 25, wherein said filament is selected from the group consisting of a resorbable thread, a natural fiber, and a filament composed of at least one of protein, lipid, biocompatible molecule or synthetic component.

35. The method according to claim 25, wherein said matrix layer further comprises cell.

36. The method according to claim 25 or 26, wherein said cell is a heterologous cell.

37. The method according to claim 25 or 26, wherein said cell is selected from the group consisting of a fibroblast, a myoblast, an osteoblast, a mesenchymal cell, an endothelial cell, an immune cell, a chondrocyte, and a combination thereof.

38. The method according to claim 25, wherein said matrix further comprises a pharmaceutically effective amount of biologically active molecule selected from the group consisting of a drug, a growth factor, a cytokine, an antibiotic, a hormones, and a combination thereof.

39. The method according to claim 25, wherein said inner matrix layer is coated by at least one supplementary matrix coating layer.

40. The method according to claim 39, wherein at least one of said inner matrix layer or filament is dehydrated or lyophilized prior coating by said supplementary matrix coating layer.

41. The method according to claim 39, wherein said supplementary matrix coating layer is dehydrated or lyophilized before being coated by another supplementary matrix coating layer.

42. The method according to claim 39 or 41, wherein said supplementary matrix coating layer or another supplementary matrix coating layer further comprises a cell.

43. The method according to claim 25, wherein said cell is an autologous cell.

44. The method according to claim 25, wherein said cell is a heterologous cell.